

Big Business and its Customers: The European Market for American Meat from 1840 to 1939

Richard Perren

University of Aberdeen

The nineteenth century saw a great growth of the traffic in primary products from the peripheral areas of the world to the commercial and industrial centre. The centre was unquestionably Britain and Europe to which the North American continent, as a thinly populated region of recent settlement, was largely peripheral. The United States' international trade in agricultural products passed through three stages. There was (1) a period of steady growth before the Civil War; (2) a period of faster growth, and of great mutual interdependence of agricultural America and industrial Europe, from the close of the Civil War to 1900; and (3) a marked decline in many classes of agricultural exports which took place from 1900 to 1939, with only a brief interruption during the First World War.¹ In 1850 the US exported raw cotton, tobacco, lumber, grain, dairy products and meat. Most countries supplying Europe with primary products remained on the periphery throughout the nineteenth and twentieth centuries², but with the evolution of the north Atlantic economy the US became the leading industrial power. Although as late as the 1930s it retained its pre-eminence as an overall exporter of agricultural products, there was nevertheless a change in emphasis.³ The growth of population, the expansion of its industrial base, increased pressure on land, and the dictates of comparative advantage forced it to not only

¹ E. G. Nourse, *American Agriculture and the European Market*, (New York 1924), pp. 7-8.

² S. Lingard and A. Tylecote, 'Resource-Rich Countries' Success and Failure in Technological Ascent, 1870-1970: the Nordic Countries Versus Argentina, Uruguay and Brazil', *Journal of European Economic History* 28.1 (1999), pp. 77-78.

³ H. C. Taylor and A. D. Taylor, *World Trade in Agricultural Products*, (New York 1943), p. 2.

reduce its position as a supplier of some of these products: between 1890 and 1900 the US reached the peak of its importance as the largest supplier of internationally traded meat products; by 1939 it was on balance a net importer of meat.⁴

The following paper deals with the way in which America used the nineteenth century domestic surplus to build up an increasingly sophisticated European trade and the way in which both sides reacted to the decline of that surplus.

1. 1840-1870

At the beginning of the nineteenth century the search for more food was seen as a major problem for the rapidly rising population of Europe.⁵ Although part of the solution was achieved by domestic agricultural change and emigration, increasing imports of grain and meat also made important contributions⁶. Initially, after cereals, the largest demand was for low-cost animal protein and here the pig provided the cheapest range of products as well as being easiest to handle and cure. In this period the international trade in meat was almost exclusively confined to that which was dried, salted, smoked or otherwise preserved. Besides pigmeat, beef and veal were the only other important meats; mutton and lamb, which are not susceptible to being dried or salted, played no part in international trade. There was some variation in US meat products exported to Europe which could be either salt pork, bacon or ham as well as some salt beef.⁷ The largest market was Britain where generally higher income levels than the rest of Europe, and the reduction of British tariffs after 1842, opened the UK market to American meat.

Suiting the European market had to be attended to in two ways. Firstly, the correct type of animal had to be selected for export. Secondly,

⁴ International Institute of Agriculture, *International Trade in Meat*, (Rome 1936), pp. 72-77, 130, 146.

⁵ T. R. Malthus, *An Essay on the Principle of Population*, (London 1798).

⁶ J. L. Simon, 'Demographic Causes and Consequences of the Industrial Revolution', *Journal of European Economic History* 23.1 (1994), pp. 141-158.

⁷ R. A. Clemen, *The American Livestock and Meat Industry*, (New York 1923), pp. 269-270.

the meat obtained from them had to be prepared so as to emulate the European products, or as the editorial writer in the *Prairie Farmer* observed: 'one cannot expect a whole country to change their custom to suit our views - if we want their markets - we must conform to their custom'.⁸ Information about the requirements of the new markets was available in press reports, sometimes written by importing houses in Europe and sometimes from American businessmen like T.C. Peters who had visited the curing and packing establishments in Ireland and the wholesale markets in Liverpool and London.⁹ There was a permanent problem with US pig-meat products, as they contained too much fat for the European consumer. This was because hogs in the US were fed on maize which produced a fatty flesh whereas on the other side of the Atlantic pigs were fed a variety of items, such as potatoes and other vegetables and also skimmed milk, and these diets produced leaner flesh.

American firms, after some initial failures, took pains to adapt to the British market and meet the requirements of the British consumer, and in the 1840s bacon and ham exports alone reached 166 million pounds.¹⁰ Trade was boosted in 1847 when the Irish potato famine stopped exports of Irish bacon and pork to mainland Britain and American traders soon turned a temporary necessity into a permanent market. But improved quality was not simply a function of the demand from Europe, it was primarily caused by the development of a uniform product to meet the needs of the American market.¹¹ Although the main market was always Britain, some American products found their way to continental Europe. Variations in the demand from the different countries in Europe also had to be attended to besides a watch on overall quality. The production of fat hogs meant the US was always an important source of animal fats - in this case lard - as well as meat, but whereas the French were said to require their American lard packed in tins, British buyers preferred bladders.¹² American producers, while never managing to satisfy more

⁸ *Prairie Farmer*, Vol. X, No. 2, Oct. 1842, pp. 86-87.

⁹ *Quincy Whig*, Oct. 22 1842; *Hunt's Merchant Magazine*, X, Jan. 1844, p. 97.

¹⁰ *Hunt's Merchant Magazine*, X, Jan.-June, 1844, passim.

¹¹ M. Walsh, *The Rise of the Midwestern Meat Packing Industry*, (Lexington, Ky. 1982).

¹² *Beardstown Gazette*, 8 Nov. 1848.

discerning British customers, satisfied the poorer transatlantic consumer enough to increase their total exports of all animals and animal products from six to 20 million dollars between 1845 and 1860. Although the Civil War saw a drastic decline in exports of cotton, exports of meat which came from the northern states rose dramatically in 1862-63 and were still at a higher level in 1865 than in 1860. The Civil War actually stimulated exports to the UK as American bacon producers found markets of the south cut off.¹⁵ But it remained inferior to the British product, as large quantities of salt were required to preserve it and highly salted rich fatty bacon did not suit the British taste, and American bacon was 2d. to 3d. per lb. less than the British article.¹⁶

2. 1871-1913

With the return of peace, by the 1870s the American packing firms looked for new outlets for their products. For some years the increase in the supply of American cattle outstripped the growth in demand. From 1856 to 1876 the average price of beef in New York was 4.5d. to 5.5d. per lb, whereas in London it was 5d. to over 6d. per lb.¹⁵ Shipments of cured and pickled beef, as well as hams, pork and lard had grown steadily, but the continued low value of all products encouraged shippers to examine the possibility of sending higher-priced fresh meat. This was allowed by two related technical changes in ocean transport systems; improved steamship design and effective refrigeration to preserve perishable foodstuffs on long voyages. Together they had the effect of reducing journey times, increasing the size and widening the range of cargoes that could be carried and reducing the cost of ocean freight.¹⁶

¹⁵ E. G. Nourse, *American Agriculture and the European Market*, (New York 1924), pp. 15, 16-17; M. Walsh, *The Rise of the Midwestern Meat Packing Industry*, (Lexington, Ky. 1982), p. 64.

¹⁶ *Journal of the Society of Arts*, No. 756, Vol. 15, 17 May 1867, pp. 414-417.

¹⁷ H. E. Alvord, 'The American Cattle Trade', *Journal of the Royal Agricultural Society of England* Series 2, Vol. XIII (1877), p. 364; A. Sauerbeck, 'Prices of Commodities and the Precious Metals', *Journal of the Statistical Society* XLIX (1886) p. 637.

¹⁸ C. K. Harley, 'The World Food Economy and pre-World War I Argentina', in S. N. Broadberry and N. F. R. Crafts (eds), *Britain and the International Economy 1870-1939*, (Cambridge 1992), pp. 244-245.

The first cargoes of chilled fresh beef arrived in Britain in 1875. Small amounts of fresh meat were sent to Liverpool in February and June by John J. Bate, but the first commercial cargo was in October that year when Timothy C. Eastman sent 45 cattle and 50 sheep from New York.¹⁷ Eastman was soon joined by a number of other shippers so that by 1877 there were eight firms sending refrigerated meat.¹⁸ These early consignments were transported in insulated timber containers kept cool by piped brine, or a circulation of cool air fed from an external supply of ice on board the ship. This process was so expensive that Eastman and the other early shippers only sent well-fed high-quality steers. The average carcass weight of Eastman's animals was 800 lb. and he favoured improved animals, either short-horns or short-horn crosses, and no inferior long-horn Texas steers were used for this trade. But even for this meat the profit margins were still small, although it arrived in good condition and the quality was definitely higher than the sorts of meat sent in the 1860s. Eastman's early cargoes sold for 7d. to 8d. per lb. while similar quality English beef fetched 10d to 12d.¹⁹

Chilled beef faced some discrimination and adverse reactions from British meat traders and British consumers. Although an improvement on salted products, in its early years it was still distinguishable from fresh-killed meat. Also the conditions of the trade itself were difficult, and with a large number of companies competing it was hard to avoid overstocked markets. Eastman set up outlets in London, Liverpool, Manchester, Sheffield, Birmingham, Leeds, Newcastle, Glasgow, Edinburgh, Dundee, and other towns in England and Scotland so that he was not dependent on a single centre.²⁰ Cold stores were only built after 1880 so in its early years American chilled beef had to be sold soon

¹⁷ United States Department of Agriculture, *Report of the Commissioner of the Operations of the Department for the Year 1876*, (Washington 1877), pp., 312-319.

¹⁸ J. Macdonald, *Food from the Far West*, (London 1878), pp. 4-6; R. Perren, *The Meat Trade in Britain, 1840-1914*, (London 1978), p. 126.

¹⁹ United States Department of Agriculture, *Report of the Commissioner of the Operations of the Department for the Year 1876*, (Washington 1877), p.316; *Report... for the Year 1877*, (Washington 1878), pp. 23, 78-79; *Meat and Provision Trades' Review*, 17 April 1880, p. 57.

²⁰ United States Department of Agriculture, *Report of the Commissioner of the Operations of the Department for the Year 1876*, (Washington 1877), p. 314.

after it was landed whatever the prevailing price. In 1878 in London the City Corporation first considered the question of cold storage and in 1882 the vaults underneath the poultry and provisions section of Smithfield Market were let on lease for that purpose.²¹ There is also evidence that some sales were handicapped by poor quality. When some cargoes of second class beef were to London in the summer of 1877 they did not make a profit. James Macdonald, author of *Food From the Far West*, concluded that 'until both the class of cattle and the mode of their treatment are greatly improved, the British market will never be greatly disturbed ... but that the best quality of American beef ... will find a moderately ready sale at a certain price.'²² The trade expanded rapidly from 206,000 lb of beef in 1875 to 44.5 million lb. in 1877.²³ Contemporaries looked to these first imports of American meat to lower British prices as the first supplies arrived at a time of high prices, but they were not sufficient to have any effect. In 1877 all American meat only accounted for three per cent of supplies in London's Smithfield Market and the Market's Superintendent believed they would need to rise to 30 per cent to have any impact on prices.²⁴

The transatlantic cattle trade provided an additional source of American beef but, unlike the chilled meat trade, it did not grow immediately. The first shipment was made to Glasgow in 1868 by Nelson Morris, but the next was not until 1872. Imports of US cattle did not face the same problems of consumer discrimination as imports of dead meat. Even though animal disease controls after 1879 meant these animals always had to be slaughtered at the port of debarkation, the final product was indistinguishable from most British beef.²⁵ Cargoes in the early 1870s were experimental and the standards of accommodation were poor, but

²¹ F. E. Martin, "Statistical Sketch of the Meat Trade" in Gresham Publishing Company Ltd. (ed.), *The Retail Meat Trade*. Vol. II, (London 1929), p. 221.

²² J Macdonald, *Food from the Far West*, (London 1878), pp. 11, 252-254, 267; also quoted in the *Meat and Provision Trades' Review*; 27 Oct. 1877, p.397.

²³ United States Department of Agriculture, *Report of the Commissioner of the Operations of the Department for the Year 1877*, (Washington 1878), p. 188.

²⁴ *Meat and Provision Trades' Review*, 5 January 1878, p. 13.

²⁵ J. Nicol, *Vital, Social, and Economic Statistics of the City of Glasgow*, (Glasgow 1885), pp. 127-130; R. Perren, *The Meat Trade in Britain, 1840-1914*, (London 1978), pp. 113, 116.

annual shipments averaged 11,000 animals by 1875-9. Observers writing in the 1870s correctly predicted that the live cattle trade would not grow at the same rate as chilled beef, but they would probably have been surprised to find that by 1900-4 over 350,000 were being annually exported from the US and over 100,000 from Canada.²⁶ London and Liverpool became the chief reception centres as they were already equipped to handle cargoes of European and Irish cattle as well as being at the centres of large consumer markets.

In the 1880s shipment of cattle was in the hands of the steamship and insurance companies, and competition to offer low freight rates meant that legislation regarding animal comfort and safety was ignored. In 1886 5,907 animals had to be thrown overboard out of 119,663 shipped from the US, and a further 560 were either dead or had to be slaughtered immediately on arrival because of injuries.²⁷ In response to public protests, a new law was passed in 1891 and its strict enforcement reduced annual losses to 0.55 per cent between 1891 and 1900.²⁸ Pressure on costs was also reduced when both the chilled beef and live cattle trade fell under the control of the large companies of the American beef trust, who emerged in the 1870s and who conducted their businesses in a broadly similar manner on both sides of the Atlantic. By the 1890s exports of chilled beef were controlled by the five big Chicago meat packing firms of Armour, Morris, Swift, Hammond, and Schwarschild and Sulzberger who worked together to regulate supplies, eliminate wasteful competition, and ensure stable prices. By 1900 there was further concentration and the trade in Britain was effectively in the hands of only three firms, Armour, Morris, and Swift.²⁹

²⁶ H. E. Alvord, 'The American Cattle Trade', *Journal of the Royal Agricultural Society of England* Series 2, Vol. XIII (1877), p. 374; *Meat and Provision Trades' Review*, 17 April 1880, p. 57; R. Perren, 'The North American Beef and Cattle Trade with Great Britain', *Economic History Review*, 24.3 (1971), p. 432.

²⁷ J. Long, 'The Sources of our Meat Supply', *Co-operative Wholesale Societies Annual*, (1891), p. 381.

²⁸ United States Department of Agriculture. *Seventeenth Annual Report of the Bureau of Animal Industry for the Year 1900*. (Washington 1900), pp. 87-88.

²⁹ M. Yeager, *Competition and Regulation: The Development of Oligopoly in the Meat Packing Industry*, (Greenwich, Conn. 1981), p. 158; A. D. Chandler, Jr., *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, (Cambridge, Mass. 1962), pp. 25-26.

The trust companies not only took control of shipping space, they also established their own wholesale and retail distribution networks in Britain. Initially, American firms traded anonymously and transatlantic imports were handled by British salesmen like Edward Pool, who in the 1860s had dealt in livestock from Europe, and Thomas Bater who began with Canadian cattle in the 1870s.³⁰ Up to the end of 1889 there were no advertisements for American firms in the chief publication of the British meat trade, the *Meat Trades Journal*. But in the 1890s they installed their own managers, some from America like L. J. Woodruff who worked for The Swift Beef Company and Abraham Cohn who worked for Morris but others, like Isaac Hodgkinson who was the manager for Armour & Co., were British.³¹ Because most British butchers were reluctant to stock American chilled beef, the US companies established their own retail chains, so the British housewife in search of chilled beef was likely to buy it from the specialist 'American meat store'.³² American chilled beef helped to alter the whole balance of arrivals at Smithfield - London's main wholesale market - in favour of imported meats, and American firms also took a number of stalls there. In keeping with their increased importance in the British market they were prominent in their advertising. Both Swift and Armour used banner advertisements in the trade press and Swift in Britain stressed the link with its American parent as well as the origin of its products. Although the intrusion of American firms was viewed with alarm, their wholesale and retail operations in Britain mirrored earlier changes in the US: because they were selling the same product in both countries they needed to adopt the same methods in both.³³

But the trade in American beef was only temporary. By 1910 the US cattle ranges had largely disappeared, and the absence of cheap land meant it was unable to compete in world markets with the products of South America and Australasia - continents where conditions were still similar to those of the US in the early nineteenth century. British imports

³⁰ *Meat Trades' Journal*, 13 October 1910, p. 432; 27 October 1910, p. 488.

³¹ *Report of the Departmental Committee on Combinations in the Meat Trade*, P.P., 1909, Cd. 4643, xv, pp. 43, 213; *Meat Trades' Journal*, 6 October 1910, p. 385.

³² V. L. Whitechurch, 'The London and North Western Railway and American Meat', *The Railway Magazine* V (1899), p. 358.

³³ R. A. Clemen, *The American Livestock and Meat Industry* (New York 1923), pp. 242-251, 279-84.

of US chilled beef and US cattle peaked in 1901 and 1905, respectively, but fell continuously thereafter.³⁴ The growth of the population fuelled by decades of immigration and supported by natural increase raised domestic demand to such a point that after 1910 US production failed to keep pace with the demand, and the beef and bacon price differential between Britain and America disappeared.³⁵

The decline in American beef products after 1900 was contemporaneous with a rise in British meat prices after a fall for over two decades. In addition, the meat trust firms came under scrutiny in the US for their oligopolistic trade practices as well as being criticised for working and hygiene conditions in the packing houses.³⁶ It was inevitable that these anxieties were expressed about their behaviour in Europe. The question of trade practices was quick to surface. It is surprising that Henry Macrosty made no mention of the American meat firms in his famous study of trusts in Britain which was published only two years before Parliament commissioned the Report of the Departmental Committee on Combinations in the Meat trade.³⁷ The 1909 Committee found that the companies in Britain were 'carrying on their business in co-operation rather than in competition but it should be said that this co-operation appears to be more for the purpose of advancing their own interests than of acquiring the trade of others'. They concluded that the combination was not yet sufficiently powerful to be a danger to the beef trade as a whole. The conclusion was probably justified as the American companies did not control the home produced beef trade which still accounted for 60 per cent of British consumption, nor all the imported beef trade. But the Committee expressed anxieties that the position might change if the trust firms established large interests in other beef-exporting countries, particularly in South America.³⁸

³⁴ J. E. Wrenn, *International Trade in Meats and Animal Fats*, (Washington 1925), p. 10; R. Perren, *The Meat Trade in Britain, 1840-1914*, (London 1978), pp. 164, 170.

³⁵ A. W. Pearse, *The World's Meat Future*, (London 1920), p. 6; E. G. Nourse, *American Agriculture and the European Market*, (New York 1924), pp. 297-8, 300-1.

³⁶ M. Yeager, *Competition and Regulation: The Development of Oligopoly in the Meat Packing Industry*, (Greenwich, Conn. 1981).

³⁷ H. W. Macrosty, *The Trust Movement in British Industry*, (London 1907).

³⁸ *Report of the Departmental Committee on Combinations in the Meat Trade*, P.P., 1909, Cd. 4643, xv, pp. 9, 15.

The activities of the firms in the Meat Trust were also called into question regarding public health. The revelations about packing house conditions in Upton Sinclair's *The Jungle*, published in 1906, prompted the US government to investigate both the system of inspection in those establishments and the moral and physical circumstances of the workers. The meat firms feared the effects of bad publicity on the export trade. One author, who expressed anxiety about the effects of American meat on public health, felt it was 'chiefly to England, we must look for the development of a public sentiment concerning meat inspection in the United States'.³⁹ When procedure in the US was tightened and inspection made compulsory from 1 July 1906, the firms blamed increased costs for a decline in the export trade. In 1906-07 the packers moved to South America for alternative sources of supply. Swift set up a plant in Argentina and the other firms soon followed with the National Packing Co.⁴⁰ But it is doubtful if the move was occasioned by legislative interference at home or a desire to escape from official supervision: it was a symptom of the declining US meat surplus. In the early years of the twentieth century the United States, though not exercising her former predominance as a beef producer, still occupied a premier position among the beef exporting countries. But between 1901 and 1904 the exports of US fresh beef declined by 16 per cent, while those of Argentina rose by over 300 per cent.⁴¹

When supplies from the US decreased, and South American beef came to dominate the export trade, the US companies established meat works in the Argentine Republic as a way of keeping their European interests afloat. They had built up a huge distributive organisation in Britain, and further investment in South America was the only way they could keep it supplied.⁴² After American companies first entered the River Plate in 1907,

³⁹ A. Leffingwell, *American Meat and Its Influence Upon the Public Health*, (London 1910), p. 160.

⁴⁰ M. Yeager, *Competition and Regulation: The Development of Oligopoly in the Meat Packing Industry*, (Greenwich, Conn. 1981), p. 206.

⁴¹ United States Department of Agriculture. *Twenty-Second Annual Report of the Bureau of Animal Industry for the Year 1905*, (Washington 1905), pp. 31-32; A. Leffingwell, *American Meat and Its Influence Upon the Public Health*, (London 1910), pp. 161-162.

⁴² D. J. Anthony and W. G. T. Blois, *The Meat Industry*, (London 1931), p. 48.

by 1909 they had 35 per cent of the beef export trade. In 1911, after a price war with the British and Argentine companies established there before 1907, they had pushed this up to 43 per cent, and in another dispute after April 1913 they increased this to 59 per cent by June 1914.⁴³ Movement into the South American market was thus forced upon the American companies by the shrinkage of US beef surpluses, and their need to retain a share of the profitable UK market. Although after 1906 the home market could absorb almost all US beef production, firms now had assets in Europe that needed protection: there were substantial amounts invested in cattle boats and refrigerated shipping space, as well as investment in their wholesale and retail outlets in the UK. In 1913 the US meat companies operating in Britain contributed about 20 per cent of the beef supply, or about half the total beef imported; at Smithfield their influence was greater and they controlled over 45 per cent of the total beef and 57 per cent of the total supply of all meats. In 1914 the four American companies, and one British company, had 144 wholesale depots in 61 towns.⁴⁴

American firms were only able to retain this share of the British market by adapting the Argentine product to fill the place left by American beef. Prior to 1900 almost all the meat, shipped from the River Plate was frozen and hence commanded a lower price than US chilled.⁴⁵ But from 1901 increasing amounts of chilled beef were sent by British and South American companies. At first the Argentine chilled beef did not match the quality of US chilled as the quality of Argentine cattle was lower, but livestock improvements were made to bridge this gap. In any case, as US chilled beef disappeared from the British market consumers lost this standard of quality against which to judge Argentine chilled. But Argentine chilled beef did not completely replace its frozen beef. In 1910 Britain imported 135,000 tons of South American chilled

⁴³ *Report of Inter-Departmental Committee on the Meat Supplies*, P.P., 1919, Cmd. 456, xxv, pp. 443-444 paragraph 17; *Profiteering Acts, 1919-1920, Interim Report on Meat (Standing Committee on Trusts)*, P.P., 1920, Cmd. 1057, xxiii, p. 550 paragraph 11.

⁴⁴ A. M. Bergman, *A Review of the Frozen and Chilled Trans-Oceanic Meat Industry*, (Uppsala 1916), pp. 25-6; *Report of Inter-Departmental Committee on the Meat Supplies*, P.P., 1919, Cmd. 456, xxv, p. 444 paragraph 19.

⁴⁵ H. Gibson, 'The Foreign Meat Supply', *Journal of the Royal Agricultural Society of England* Series 3, Vol. VII (1896), pp. 207-211.

beef but imports of South American frozen beef were still over 250,000 tons.⁴⁶

In addition, American firms were prompted to extend operations to South America by the fear that supplies of domestic beef alone might not be enough for the US market. By 1914 it was described as 'an open customer for meat' and there were anxieties that the Underwood Tariff Act, passed in 1913, which removed duties on meat shipped to the US, would see the long term diversion of Canadian, Australasian and South American meat from Europe. Considerable amounts were shipped from these countries to the US between the middle of 1913 and the outbreak of war.⁴⁷

Besides beef, pigmeat remained the other important US meat export; negligible mutton was exported as Australia and New Zealand could supply greater quantities at lower prices. In fact US exports of bacon and hams, which were the main pig products, were greater in volume, though lower in unit value, than those of beef.⁴⁸ Between 1870 and 1914 exports of pigmeat remained as important as they had been between 1840 and 1870 and unlike beef exports, those of pigmeat did not disappear before the First War. It is more difficult to generalise about pigmeat than about beef products because of the greater variety; even bacon is prepared in a number of ways. The share of the US in the total imports of pigmeat into the UK in 1888, when supplies reached their peak, was 92.2 per cent for hams and bacon, 88.1 per cent for salted pork, and 58.7 per cent for fresh, chilled and frozen meat. Thereafter domestic demand in the US began to increase, and the competition from third countries was more keenly felt. Imports of American salt pork declined in the face of imports of Dutch refrigerated pork and American bacon experienced competition from Danish, so that overall the US lost its predominant position in the English import market. The development

⁴⁶ United States Department of Agriculture, *Annual Reports of the Bureau of Animal Industry*, 25th Report, (1908), pp. 315-16; J. T. Critchell and J. Raymond, *A History of the Frozen Meat Trade*, (London 1912) p. 423.

⁴⁷ *Meat Trades' Journal*, 1 Jan. 1914, p.12; 15 Jan. 1914, p. 68; R. Ramsay "The World's Frozen and Chilled Meat Trade" in Gresham Publishing Company Ltd. (ed), *The Frozen and Chilled Meat Trade*, Vol. 1, (London 1934), p. 16.

⁴⁸ J. T. Critchell and J. Raymond, *A History of the Frozen Meat Trade*, (London 1912); R. Perren, *The Meat Trade in Britain, 1840-1914*, (London 1978), p. 170.

of US exports of lard also increased along with pigmeat, but at the beginning of the twentieth century this trade received a check from increased production of artificial fats and margarine.⁴⁹

The British and European market for pig products played a crucial role in stabilising prices for the American farmer, and there was a tendency for exports to rise when US prices were low. The basic cause of the decline in pig products after 1900 was the same as for beef, that is rising demand in the US, although this did not entirely eliminate its pork, lard and bacon surpluses. In addition to increasing demand in the home market, US bacon exports faced competition in its main export market in Britain, from Danish bacon which overtook US bacon in the British market after 1910.⁵⁰ Exports of US bacon to the United Kingdom were lower quality than Danish bacon. This was reflected in the price of the two products, and the Bureau of Animal Industry urged US producers to improve their performance in this area. Some progress was made and the price difference which had been as high as 4 cents per lb. in the 1890s was reduced to 1.5 cents by 1903.⁵¹ The continued competitive

TABLE 1 - Meat Consumption in the United States, United Kingdom, Germany, and France, 1900-09

	Beef & Veal		Mutton & Lamb		Pork & Ham		Total
	Kg.	%	Kg.	%	kg.	%	
USA	35	45	5	6	38	49	78
UK	27	50	12	22	15	28	54
Germany	18	37	1	3	29	60	48
France	22	60	9	24	46	16	37

Source: United States Department of Agriculture, *Twenty-Second Annual Report of the Bureau of Animal Industry for the Year 1905*, (Washington 1907), pp. 283-285; *Twenty-Sixth Annual Report... for the Year 1909*, (Washington 1911), p. 315.

⁴⁹ *Report on the Marketing of Pigs in England and Wales* (1926), No. 12, pp. 4, 6; International Institute of Agriculture, *International Trade in Meat*, (Rome 1936), pp. 92, 94.

⁵⁰ E. G. Nourse, *American Agriculture and the European Market*, (New York 1924), pp. 255-257, 291-293; G. E. Putnam, *Supplying Britain's Meat*, (London 1923), pp. 157, 158-60.

⁵¹ United States Department of Agriculture, (Section of Foreign Markets - Bulletin No. 26, 1902) *Agricultural Imports of the United Kingdom, 1896-1900*, p. 28; United States Department of Agriculture, *Twentieth Annual Report of the Bureau of Animal Industry for the Year 1903*, (Washington 1903), pp. 459, 477.

weakness of US versus Danish bacon can be explained by the fact that Danish agricultural co-operative societies produced a specialised small lean bacon pig, tailored to meet the needs of the British market whereas the American animal was still too large and too fat. Also, Danish bacon was mild-cured and over the nineteenth century British consumers, especially in the south of England, came to favour this rather than traditional heavily-salted American varieties.⁵²

Although Britain was always the main market for American meat, US firms made some attempts to develop a trade with the rest of Europe, but with limited success. The market opportunities for US meat in Europe were determined by income levels, national patterns of meat consumption, and the extent of agricultural protection. Its adherence to free trade and high income levels made the United Kingdom the largest market. Lower incomes, less urbanisation, and a larger rural population who demanded protectionist policies, limited the size of the market in other countries. In addition, their consumption patterns were rather different from Britain's. A reasonably complete picture of consumption per head for the US, UK, France and Germany is presented in Table 1 above, which was prepared by the Bureau of Animal Industry to familiarise US producers with the nature of the European market. France had the greatest veal consumption and Germany the largest amount of pork. Britain's pattern of consumption with its higher percentage of beef was closest in character to the US. All three countries were potential markets as per capita meat consumption was lower than the US, but if we take per capita consumption as an indicator of relative income levels and effective demand, then Britain, followed by France and Germany, offered the best opportunities. The American market was northern Europe and very little went to lower income southern Europe.

Germany was the next largest importer of US meat products in Europe but lagged a long way behind. In 1901 the US exported \$M186 worth of meat products, of which \$M118 went to Britain, \$M21 to Germany and

⁵² *Report on the Marketing of Pigs in England and Wales* (1926), No. 12, p. 4; P. Lamartine Yates, *Food Production in Western Europe*, (London 1940), pp. 46-47.

\$13M to Holland.⁵³ The high per capita consumption of pigmeat in Germany suggests that here was the largest unexploited potential market for American meat. The largest item of meat products exported to Germany was lard, which in 1903-04 comprised over two-thirds of its US meat products.⁵⁴ Like other European countries, Germany used both tariff and non-tariff barriers against the import of American meat. For example, Germany placed an absolute ban on all imports of pig meat from 1883 to 1891 based on the fear of infection from trichinosis. Even after this was removed there is evidence that municipalities exercised their duties of inspection in a burdensome and even arbitrary way.⁵⁵

There is evidence that the US government provided assistance to ease the way for American meat firms and products into the British and the European markets, but that its efforts were more effective in Britain. For example, in June 1897 the US Bureau of Animal Industry representative for the United Kingdom successfully lobbied the chairman of the Southwestern Railway to establish a foreign animals wharf at Southampton to provide outlets for US beef to more markets along the south coast.⁵⁶ But despite the hindrances European governments placed on American meat imports, the industry still attempted to advertise itself there. In July 1900 the Bureau of Animal Industry organised the packing firms to provide a comprehensive range of fresh meats for the food section of an international exhibition held in Paris. These were displayed in large glass-fronted refrigerated display cases which had to be periodically replenished with fresh supplies throughout the two weeks of the event. Although the exhibit excited much interest on the part of merchants and approval from the general public, it encountered opposition from government officials, acting on behalf of French farmers. Ignoring a government dispensation given to the American exhibitors

⁵³ United States Department of Agriculture, (Section of Foreign Markets - Bulletin No. 29, 1902) *Distribution of the Agricultural Exports of the United States, 1897-1901*, p. 21.

⁵⁴ United States Department of Agriculture, *Twenty-First Annual Report of the Bureau of Animal Industry for the Year 1904*, (Washington 1905), p. 481.

⁵⁵ United States Department of Agriculture, *Fifteenth Annual Report of the Bureau of Animal Industry for the Year 1898*, (Washington 1899), pp. 516-519.

⁵⁶ United States Department of Agriculture, *Fifteenth Annual Report of the Bureau of Animal Industry for the Year 1898*, (Washington 1899), p. 440.

for the duration of the exhibition, freeing them from current restrictions on meat imports, they obstructed the movement of fresh supplies of meat from the port to the exhibition site, as well as hindering the sale of the replaced meat at the Paris markets. As a result, harassed American officials spent a considerable amount of time arguing with their Parisian counterparts.⁵⁷

3. 1914-1919

The First World War provided a temporary reverse to the long-term decline in the role of the US as a supplier of internationally traded meat. The supposed vulnerability of the UK in time of war, because of its heavy reliance on imported foodstuffs, was tested not only for meat but for all foodstuffs. The heavy dependence on all imported food supplies was reflected in their position in Britain's food priorities. First in order was bread grains for civilians and the military, secondly supplies for the army, and third came meat and fats for civilians.⁵⁸ The British government's requirement to obtain sufficient meat for the Army led the Board of Trade to requisition all insulated space on home-coming vessels from Australia, New Zealand, and South America early in 1915. This strengthened the hand of the Board of Trade in bargaining with the meat companies as they could find no market for their goods without the use of refrigerated

**TABLE 2 - Imports of Principal Foodstuffs from the United States
(per cent of total food imports)**

	1913	1915	1918
Wheat and Flour	34.7	49.0	52.3
Beef and Veal	1.6	8.3	31.2
Bacon and Ham	44.9	60.9	83.7

Source: L. M. Barnett, *British Food Policy During the First World War*, (London 1985), p. 165

⁵⁷ United States Department of Agriculture, *Seventeenth Annual Report of the Bureau of Animal Industry for the Year 1900*, (Washington 1901), pp. 223-234.

⁵⁸ L. M. Barnett, *British Food Policy During the First World War*, (London 1985), pp. 186-187.

ships and they were allowed only 20 per cent of this space to transport meat for sale to civilians.⁵⁹

Although in the early years of the war there was a substantial rise in the price of all foods, including meat, this did not cause much immediate hardship as the demand for extra labour and higher wages generated by the expansion of the armament industries meant that the level of unemployment in Britain was lower than in peace time. The *Report of the Departmental Committee on Prices* in 1916 found that the price of meat had risen by more than 5d. per lb., but that the rise in ocean freights was not more than 1d. per lb. The profits of both British and American meat firms had risen since the war but there was no evidence the level was excessive. The main forces driving up prices were the shortage of supply and increased demand, rather than any combination among the meat firms. In the case of bacon the Committee, after a searching investigation into alleged rings, found no proof of any inflation through their influence; on the contrary the retail prices of Canadian bacon appeared to be lower in London than in Toronto, and in some cases the price of American bacon in the summer of 1916 meant a loss to the American packer.⁶⁰ But in wartime the situation changed rapidly, and in any case the problems of supply were underestimated in its early stages. Towards the end of 1916 greater physical shortages, brought about by more serious interruptions in supplies, caused the government to exercise greater control over meat imports and to intervene more in the way in which all meat firms traded.

The continuation of submarine warfare and the resulting shortage in world shipping forced the Allied nations, and Britain in particular, to depend more and more on the United States for their food supply. There was a great expansion in US meat production under the demands of the Allies. It can be seen from Table 2 above that serious shortages in the British food supply by 1918 made US contributions vitally important in the final stages of the war. Although grain and sugar were the major

⁵⁹ W. H. Beveridge, *British Food Control*, (London 1928), pp. 11-12.

⁶⁰ *Departmental Committee on Increase of Prices of Commodities since the Beginning of the War, Interim Report. Meat Milk and Bacon*, P.P., 1916, Cd. 8358, xiv, pp.5, 7-11, 13-14; W. H. Beveridge, *British Food Control*, (London 1928), pp. 12, 21.

foodstuffs that Britain purchased from America with US Treasury credits between 1917 and 1919, significant quantities of meat, principally pork, were also involved. The only group of US meat products separately identified during the wartime and reconstruction period was pork and 2,040,300 tons was sent to Europe by the US government between 1914 and 1924, of which 957,641 went to Britain between 1917 and 1919.⁶¹

In 1913 the United States and Canada furnished only 1.7 per cent of Britain's fresh meat imports, but by 1918 this had climbed to 36.2 per cent., most of which came from the United States.⁶² In 1913 the United States was still an important supplier of bacon and hams, accounting for 44.9 per cent. of Britain's imports, but by 1918 it supplied 83.7 per cent., and if Canada is included in 1918 the two countries together supplied 98.9 per cent. of imported bacon and ham. In fact, the imports of bacon from North America were more than double those from all sources before the war; an increase which was more than sufficient to make up for the fall in home production.⁶³ The strong market for pig meat in Europe during the war inevitably encouraged an immense increase in US pig production. The problem facing the US after the war was that when the demand from Europe declined its farmers were left with surpluses.⁶⁴

The wartime years coincided with a cyclical upswing in United States cattle numbers and beef production; from an average of 57 million for 1909-19 they reached a high point of 71 million in 1918. US beef exports, which were insignificant in 1913, rapidly revived and by 1918 they had reached the highest level for the twentieth century.⁶⁵ American firms had

⁶¹ D. J. Anthony and W. G. T. Blois, *The Meat Industry*, (London 1931), pp. 75-76; F. M. Surface and R. L. Bland, *American Food in the World War and Reconstruction Period*, (Stanford, Cal. 1931), pp. 266, 274.

⁶² HMSO, *Cattle and Beef Survey: A Summary of Production and Trade in British Empire and Commonwealth Countries* (Prepared by the Intelligence Branch of the Imperial Economic Committee 1934), pp. 73, 267-268.

⁶³ W. H. Beveridge, *British Food Control*, (London 1928), pp. 134-6; P. E. Dewey, *British Agriculture in the First World War*, (London 1989), p. 221.

⁶⁴ International Institute of Agriculture *World Production in Meat*, (Rome 1938), pp. 153, 167-9.

⁶⁵ HMSO, *Cattle and Beef Survey: A Summary of Production and Trade in British Empire and Commonwealth Countries* (Prepared by the Intelligence Branch of the Imperial Economic Committee 1934), pp. 267-268.

an even larger share of the wartime trade with Britain, than is indicated by exports from the US, because of their interests in South America. Out of 441,000 tons of chilled and frozen beef imported in 1914 the South American works of three US companies supplied 228,000 tons. But they were required to change the balance between chilled and frozen beef in favour of the latter as the British Army required meat with a long storage life. This meant they had to reverse the pre-1914 trend towards greater emphasis on chilled beef and now concentrate on frozen beef.⁶⁶

The increased reliance on the US itself brought problems of administration. The necessity for extensive controls over the import of foodstuffs was only apparent by the later stages of the war; up to 1916 they were relatively relaxed but the start of unrestricted submarine warfare forced the British government to adopt stricter measures and enabled the US to dictate some aspects of policy. This caused friction and complaints over some products, particularly about bacon. From 1914 to September 1917 US pig production was low as the high export prices for grain discouraged US farmers from feeding hogs. But when Britain required more imports, the American government provided cheap grain for US pig farmers and encouraged the American public to eat less pork to increase the surplus for export. This led to a dramatic increase in the US pig numbers from the normal 70 million to 100 million by July 1918, and enormous quantities of bacon became available for export. In March and April 1918 alone the US insisted that the Allies take 450,000 tons, almost 100,000 tons more than for the whole of 1917. Much of the bacon was mild-cured and needed to go into cold storage or further curing on arrival. But there was insufficient cold-store space; the ports were unable to cope with huge amounts of perishable food; the distribution network was unable to cope with such amounts and consignments rotted on the quayside and blocked unloading of other imports. By the time the bacon reached the retail shops some of it had gone bad and consumers blamed the Ministry of Food for poor management.⁶⁷

⁶⁶ *Weddel's Review of the Frozen Meat Trade*, 1914, pp. 4, 6.

⁶⁷ L. M. Barnett, *British Food Policy During the First World War*, (London 1985), pp. 177-178.

4. 1919-1939

The disrupted state of the world meat market continued in the months after the war and continued to have adverse effects on the British consumer. From 1915 to 1923 the US supplanted Denmark as Britain's chief source of bacon.⁶⁸ As transatlantic supplies continued to pour into Britain throughout 1919, and in the first half of 1920, further questions about its quality were asked in the House of Commons, and allegations were made that large amounts were fit only to be consigned to the soap-boilers.⁶⁹ The huge stocks in the United States meant the US government was in a strong position to place pressure on Britain to accept imports which it was far less able to store. It had a population of 45 million but only 43 million cubic foot of cold storage, whereas the US, with a population of 95 million, had 700 million cubic feet of cold storage or over seven times as much per head as Britain.⁷⁰ This situation only served to fuel resentment that both the US government and meat packers were taking advantage of postwar shortages to exploit the British taxpayer and consumer.

Although all meat companies had made large profits during the war, the report of the 1920 Committee on Trusts found no evidence that it had provided a special opportunity for any of them to form combinations in any branch of the meat trade. In the sale of beef, American companies had pursued a common strategy and increased their share of this trade partly by investing in more capacity and by aggressive competition with British and native firms in South America, just as they had done before the war, and they retained their share of the trade between the wars⁷¹. Nevertheless, British meat traders and government again had anxieties that the American firms were looking for world domination, as they had established branches in Canada and Australia. Now they hoped the

⁶⁸ J. E. Wrenn, *International Trade in Meats and Animal Fats*, (Washington, 1925), p. 55.

⁶⁹ *Meat Trades' Journal*, 1 April 1920, p. 526; 15 July 1920, p. 72; 12 Aug. 1920, p. 196.

⁷⁰ *Meat Trades' Journal*, 22 January 1920, p. 168.

⁷¹ *Profiteering Acts, 1919-1920. Interim Report on Meat (Standing Committee on Trusts)*, P.P., 1920, Cmd. 1057, xxiii, pp. 551-552; F Gerrard (ed), *The Book of the Meat Trade*, Vol. I, (London 1949), p. 219.

Vestey brothers' Union Cold Storage Company, the one really large British concern in the international meat trade with works in South America and further growth by Commonwealth firms, would be powerful enough to hold them at bay.⁷² But US Companies had a far stronger domination of the market for beef than for mutton or pig-meat. In the 1920s the big five (Swift, Armour, Morris, Wilson and Cudahy) only controlled about half the American bacon imports; in addition there were about 35 independent importers who controlled the rest of the trade. They had a far stronger domination of the market for beef than for either mutton or pig-meat. In the interwar years American bacon was just one of a variety of products - English, Scotch, Irish, Danish, Dutch, Canadian - available to the British consumer. In the case of mutton and lamb, as New Zealand had always been the chief supplier, this trade was dominated by Commonwealth firms and American companies had no presence there.⁷³

In 1924-28 the United States exported 197,000 tons of meat, by far the largest part as bacon and hams.⁷⁴ But American bacon remained an inferior product and the revival of the Danish trade in 1923 prompted a protracted, though unsuccessful, sales campaign by US firms to extend the use of American bacon.⁷⁵ Britain's very best imported bacon was from Ireland (counted as an import after 1922) followed by Denmark, Canada and, last of all, the United States. The centre of the American trade in Britain remained around Liverpool where most of the firms carried large stocks to meet the demand of the immediate area, although even here there were signs that it was losing some of its hold in the 1920s.⁷⁶

⁷² *Report of the Royal Commission on the Meat Export trade of Australia*, P.P., 1914-16, Cd. 7896, xlv, pp. 24-34; *Report of Inter-Departmental Committee on the Meat Supplies*, P.P., 1919, Cmd. 456, xxv, pp. 455-458; R. J. McFall, *The World's Meat*, (New York 1927), pp. 561-562.

⁷³ *Profiteering Acts, 1919-1920. Final Report on Meat (Standing Committee on Trusts)*, P.P., 1921, Cmd. 1356, xvi, p. 788; *Report on the Trade in Refrigerated Beef, Mutton and Lamb* (1925), No. 6, pp. 60, 65; R. J. McFall, *The World's Meat*, (New York 1927), 559; International Institute of Agriculture, *International Trade in Meat*, (Rome 1936), pp. 148-150.

⁷⁴ H. C. Taylor and A. D. Taylor, *World Trade in Agricultural Products*, (New York 1943), p. 154.

⁷⁵ J. E. Wrenn, *International Trade in Meats and Animal Fats*, (Washington, 1925), pp. 55-56.

⁷⁶ *Report on the Marketing of Pigs in England and Wales* (1926), No. 12, p. 4.

By and large it was not transported over long distances within the UK, although smaller amounts were landed at London and other ports. After further processing some American bacon and hams were re-exported to Ireland, the tropics and the Far East. Up to June 1927 borax could be used to preserve the best mild-cured American bacon and hams, which allowed merchants to keep stocks for about a month. But when this was forbidden by British public health regulations they were reluctant to hold large stocks, as the need for a quick sale exposed them to the full force of short-term price fluctuations, and imports declined. Only a small amount of American bacon from the north-western States was good enough to compete in the London market with higher quality Danish and English. As there was a high demand for animal fats from those in heavy manual work, like miners and steel-workers, most American bacon went to the northern working class consumer, both directly to the housewife feeding her family as well as being purchased by boarding-house landladies. Although the US retained its excess of pigmeat, it was generally much smaller after 1924 than before 1914, and became insignificant in the late 1930s.⁷⁷

In the 1930s the real market opportunities for the American firms remained with beef, as the British Empire absorbed about 80 per cent of the beef and veal entering world trade but only about 20 per cent of the beef and veal traded internationally was of Empire origin. After the war the US cattle population declined, and so did its beef export trade and by 1926 the United States was on balance a beef-importing country.⁷⁸ The interwar decline in US beef exports confirmed the American packers' decision to extend their sources of supply before 1914. In the 1930s North American companies still controlled the British imported beef trade because they controlled the majority of supplies from South America. Best South American chilled beef was regarded as the top quality imported

⁷⁷ *Report on the Pork and Bacon Trades in England and Wales*, (1928), No. 17, pp. 73-74, 78-80, 98-99; H. C. Taylor and A. D. Taylor, *World Trade in Agricultural Products*, (New York 1943), pp. 166-168.

⁷⁸ HMSO, *Cattle and Beef Survey: A Summary of Production and Trade in British Empire and Commonwealth Countries* (Prepared by the Intelligence Branch of the Imperial Economic Committee 1934), pp. 5, 268-269.

beef, followed by South American frozen, and then New Zealand and Australian frozen. The distribution network for the American firms remained virtually self-contained as they also controlled their own retail shops as well as cold stores and wholesaling network. Supplies continued to be well regulated to reduce the likelihood of surpluses, and, if any occurred they were disposed of through their depots in the larger towns as well as by their salesmen who visited British retailers in the surrounding towns and villages.⁷⁹

The international trade in meat reached its peak in 1929 when the move towards protection and national self-sufficiency placed increasing pressure on it in the 1930s, especially after the decisions of the 1932 Ottawa Conference were carried out. Exports by the American companies from Argentina were affected by the Anglo-Argentine Agreement of May 1933. Under this, Britain pegged imports of chilled beef at the level in 1932. If British beef prices fell, then imports were reduced, but those from Argentina suffered the first reduction before any cut was applied to supplies from Commonwealth countries. This meant that from a peak of 610,000 tons in 1927, British imports of Argentine chilled and frozen beef declined to 400,000 tons in 1935, and those from Commonwealth countries rose from 50,000 tons to 145,000 tons between the same dates.⁸⁰ This substitution of Commonwealth meat for Argentine meat left the American companies in Britain with somewhat smaller supplies from their own works. However, unlike the Commonwealth companies, they had a better distributive system in Britain ranging from wholesale markets stalls and depots to retail shops. Also as every American meat company ensured its South American freezing works a constant supply of beef, as well as working with other companies to regulate supplies, their British outlets were in a strong market position and able to avoid undue shortages or excessive supplies.⁸¹ Supplies of US pigmeat of all kinds declined continuously after 1924 when they amounted to 45,000 tons or 19.4 per cent of imports; by 1935 they had fallen to 7,500 tons or 6.4 per

⁷⁹ D. J. Anthony and W. G. T. Blois, *The Meat Industry*, (London 1931), pp. 48, 72-73.

⁸⁰ International Institute of Agriculture, *International Trade in Meat*, (Rome 1936), pp. 28-9, 44-43.

⁸¹ *Report on the Trade in Refrigerated Beef, Mutton and Lamb* (1925), No. 6, pp. 26-27.

cent of imported pigmeat. After the war the UK continued to head the countries importing lard, a demand which increased to 140,000 tons in 1933-34, and then halved in 1935, in consequence of smaller supplies coming from the United States.⁸²

5. Conclusion

The strategy of firms engaged in the American/European meat trade passed through a number of stages. The market in Europe was explored and the requirements of its consumers were ascertained in the 1840s in order to dispose of US domestic surpluses. At that time only traditional preserved pork products were supplied, but when technical changes brought high-value fresh meat products on stream in the United States after 1860, knowledge of the European and British markets was utilised from 1870 to dispose of surpluses, as they had before the 1860s. The firms were major pioneers in the inter-continental transport of perishable foodstuffs. Prior to the 1870s all internationally traded foodstuffs such as grain, sugar, butter and cheese, as well as salted and smoked meats, enjoyed a reasonably long storage life. The imports of refrigerated beef were the first examples of a highly perishable foodstuff and as such it required the development of new technologies to cope with transportation, as well as new techniques of distribution once it reached its final markets. The American firms soon discovered fresh beef required a far more elaborate system of marketing than preserved meats. Potential losses were much higher but so were potential profits. The need to avoid congested markets and spoiled consignments required them to assume an active role both in the wholesale and retail divisions of the British domestic market, and to develop extensive interests in both. When US beef surpluses dried up after 1900, the American firms were faced with alternative strategies. They could have disposed of their fresh meat marketing organisations in Britain while continuing to trade in preserved pig products. But partly because of anxieties over the continued ability

⁸² International Institute of Agriculture, *International Trade in Meat*, (Rome 1936), pp. 89, 106-107.

of the United States to supply its own beef market, fresh sources of supply were developed in South America.

Because the American companies pioneered new methods of food distribution in Britain, they were ideally positioned to develop the South American beef trade; as multi-national companies they not only exported a product but also a method of business. However, they were never pioneers in the South American trade as there were already a number of established British and native companies exporting meat in South America. US chilled beef had set the standard for top of the range quality refrigerated beef in Britain before 1900 and this standard US companies applied to Argentine beef when supplies from their own country ceased. Unlike beef, US bacon never occupied top position in the quality range because the feeding provided by American farmers was not suitable and they lacked the incentive of Danish farmers for improvement because they exported a smaller proportion of total output. The main advantage of the European export market for pig products to the US farmer and meat-packer was to stabilise home prices by absorbing surpluses in particular years without being a major part of their income. The disturbed trading conditions in the 1930s threatened the position of US firms in Britain. In common with much of the southern hemisphere, South America was an important source of primary products and retained the ability to supply substantial amounts of beef throughout the 1920s and 1930s. But the Great Depression of the 1930s prompted the British government to favour home production and Commonwealth meat imports in preference to South American. But American firms needed to survive in Britain because fears of foot-and-mouth disease closed the US market to South American beef in the 1930s and there was no alternative market open to them. Though the British market saw no growth after 1929, it still remained the world's largest meat importer.⁸³ In addition, the American firms diversified by handling Commonwealth meats in their retail shops and used their wholesale branches to supply

⁸³ S. G. Hanson, *Argentine Meat and the British Market*, (Stanford, Cal. 1938), pp. 259, 266-267, 269-270; H. C. Taylor and A. D. Taylor, *World Trade in Agricultural Products*, (New York 1943), pp. 170, 174, 180.

a wide range of products, like offals and sausage casings, to other meat traders.⁶⁴

Because of their size and market power, American meat-exporting companies were always regarded with strong suspicion. In the 1870s and 1880s the hostility was from the retail and wholesale sectors of the meat trade. This was because they were anxious about the ultimate role of imported fresh meat in the domestic market as well as the ability of home-produced supplies to compete on price. After 1890 there was further anxiety as the American companies extended their position in the wholesale trade, especially with regard to their position in the London trade. In the twentieth century the anxieties of private traders were taken on by governments fearful of the extent to which a strategically important food might fall under oligopolistic control. These fears were strengthened during the war itself and its immediate aftermath, partly because of the large profits made by all companies during the conflict. Both the profits and the fears of the "Trust" companies subsided in the 1930s with the abandonment of free trade and the resort to tariffs and other forms of protectionism. One result of these measures was to give all governments far more powerful weapons of control over the growth and activities of foreign companies in Europe than they had ever possessed in the era of economic liberalism.

REFERENCES

Books and Articles

- H. E. ALVORD, 'The American Cattle Trade', *Journal of the Royal Agricultural Society of England*, Series 2, Vol. XIII (1877), pp. 356-374.
- D. J. ANTHONY and W. G. T. BLOIS, *The Meat Industry*, (London 1931).
- L. M. BARNETT, *British Food Policy During the First World War*, (London 1985)
- A. M. BERGMAN, *A Review of the Frozen and Chilled Trans-Oceanic Meat Industry*, (Uppsala 1916).

⁶⁴ *Meat Trades' Journal*, Jan.-June 1930, passim.

- W. H. BEVERIDGE, *British Food Control*, (London 1928).
- A. D. CHANDLER, Jr., *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, (Cambridge, Mass. 1962).
- R. A. CLEMEN, *The American Livestock and Meat Industry*, (New York 1923).
- J. T. CRITCHELL and J. RAYMOND, *A History of the Frozen Meat Trade*, (London 1912).
- P. E. DEWEY, *British Agriculture in the First World War*, (London 1989).
- F. GERRARD (ed.), *The Book of the Meat Trade*, Vol. I, (London 1949).
- H. GIBSON, 'The Foreign Meat Supply', *Journal of the Royal Agricultural Society of England* Series 3, Vol. VII (1896), pp. 206-219.
- S. G. HANSON, *Argentine Meat and the British Market*, (Stanford, Cal. 1938).
- C. K. HARLEY, "The World Food Economy and pre-World War I Argentina", in S. N. Broadberry and N. F. R. Crafts (eds), *Britain and the International Economy 1870-1939*, (Cambridge 1992), pp. 244-68.
- INTERNATIONAL INSTITUTE OF AGRICULTURE, *International Trade in Meat*, (Rome 1936).
- INTERNATIONAL INSTITUTE OF AGRICULTURE, *World Production in Meat*, (Rome 1938).
- P. LAMARTINE YATES, *Food Production in Western Europe*, (London 1940).
- A. LEFFINGWELL, *American Meat and its Influence Upon the Public Health*, (London 1910).
- S. LINGARDE and A. TYLECOTE, 'Resource-Rich Countries' Success and Failure in Technological Ascent, 1870-1970: the Nordic Countries Versus Argentina, Uruguay and Brazil', *Journal of European Economic History* 28.1 (1999), pp. 77-112.
- J. LONG, 'The Sources of our Meat Supply', *Co-operative Wholesale Societies Annual*, (1891), pp. 380-444.
- J. MACDONALD, *Food from the Far West*. (London 1878).
- H. W. MACROSTY, *The Trust Movement in British Industry*, (London 1907).
- F. E. MARTIN, "Statistical Sketch of the Meat Trade" in Gresham Publishing Company Ltd. (ed.), *The Retail Meat Trade*, Vol. II, (London 1929).
- R. J. MCFALL, *The World's Meat*, (New York 1927).
- T. R. MALTHUS, *An Essay on the Principle of Population*, (London 1798).
- J. NICOL, *Vital, Social, and Economic Statistics of the City of Glasgow*, (Glasgow 1885).
- E. G. NOURSE, *American Agriculture and the European Market*, (New York 1924).
- A. W. PEARSE, *The World's Meat Future*, (London 1920).

- R. PERREN, 'The North American Beef and Cattle Trade with Great Britain', *Economic History Review* 24.3 (1971), pp. 430-444.
- R. PERREN, *The Meat Trade in Britain, 1840-1914*, (London 1978).
- G. E. PUTNAM, *Supplying Britain's Meat*, (London 1923).
- R. RAMSAY "The World's Frozen and Chilled Meat Trade" in Gresham Publishing Company Ltd. (ed) *The Frozen and Chilled Meat Trade*, Vol. I, (London 1934).
- A. SAUERBECK, 'Prices of Commodities and the Precious Metals', *Journal of the Statistical Society* XLIX (1886), pp. 581-648.
- J. P. SHELDON, 'Report on the American and Canadian Meat Trade', *Journal of the Royal Agricultural Society of England*, Series 2, Vol. XIII (1877), pp. 295-355.
- J. L. SIMON, 'Demographic Causes and Consequences of the Industrial Revolution', *Journal of European Economic History* 23.1 (1994), pp. 141-58.
- U. SINCLAIR, *The Jungle*, (New York 1906).
- F. M. SURFACE and R. L. BLAND, *American Food in the World War and Reconstruction Period*, (Stanford, Cal. 1931).
- H. C. TAYLOR and A. D. TAYLOR, *World Trade in Agricultural Products*, (New York 1943).
- M. WALSH, *The Rise of the Midwestern Meat Packing Industry*. (Lexington, Ky. 1982).
- V. L. WHITECHURCH, 'The London and North Western Railway and American Meat', *The Railway Magazine* V (1899), pp. 358-363.
- J. E. WRENN, *International Trade in Meats and Animal Fats*, (Washington, 1925).
- M. YEAGER, *Competition and Regulation: The Development of Oligopoly in the Meat Packing Industry*, (Greenwich, Conn. 1981).
- HMSO, *Cattle and Beef Survey: A Summary of Production and Trade in British Empire and Commonwealth Countries* (Prepared by the Intelligence Branch of the Imperial Economic Committee 1934).

BRITISH PARLIAMENTARY PAPERS

- Report of the Departmental Committee on Combinations in the Meat Trade*, P.P., 1909, Cd. 4643, xv.
- Report of the Royal Commission on the Meat Export trade of Australia*, P.P., 1914-16, Cd. 7896, xlvi.
- Departmental Committee on Increase of Prices of Commodities since the Beginning of the War, Interim Report, Meat, Milk and Bacon*, P.P., 1916, Cd. 8358, xiv.

Report of Inter-Departmental Committee on the Meat Supplies, P.P., 1919, Cmd. 456, xxv.

Profiteering Acts, 1919-1920, Interim Report on Meat (Standing Committee on Trusts), P.P., 1920, Cmd. 1057, xxiii.

Profiteering Acts, 1919-1920, Final Report on Meat (Standing Committee on Trusts), P.P., 1921, Cmd. 1356, xvi.

Report of Joint Committee of Enquiry into the Anglo-Argentine Meat Trade, P.P., 1937-38, Cmd. 5839, viii.

MINISTRY OF AGRICULTURE AND FISHERIES ECONOMIC SERIES

Report on the Trade in Refrigerated Beef, Mutton and Lamb (1925), No. 6.

Report on the Marketing of Pigs in England and Wales (1926), No. 12.

Report on the Pork and Bacon Trades in England and Wales (1928), No. 17.

Report on the Marketing of Cattle and Beef in England and Wales (1929), No. 20.

Report on the Committee Appointed to Review the Working of the Agricultural Marketing Acts (1947), No. 48.

UNITED STATES GOVERNMENT PUBLICATIONS

United States Department of Agriculture, (Section of Foreign Markets - Bulletin No. 26, 1902) *Agricultural Imports of the United Kingdom, 1896-1900*.

United States Department of Agriculture, (Section of Foreign Markets - Bulletin No. 29, 1902) *Distribution of the Agricultural Exports of the United States, 1897-1901*.

United States Department of Agriculture, *Annual Reports of the Bureau of Animal Industry*, 1884-

United States Department of Agriculture, *Reports of the Commissioner of the Operations of the Department for the Year*, 1862-

NEWSPAPERS AND MAGAZINES

Beardstown Gazette.

Hunt's Merchant Magazine.

Richard Perren

Journal of the Society of Arts.

Meat Trades' Journal.

Meat and Provision Trades' Review.

Prairie Farmer.

Quincy Whig.

Weddel's Review of the Frozen Meat Trade.